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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Group Art Unit: 3681

IHAB SOLIMAN et al.

Examiner: Roger L. Pang

Serial No.: 10/712,683

Filed: November 13, 2003

For: AN ELECTRONIC ADAPTIVE SWAP-SHIFT CONTROL
FOR AN AUTOMATIC TRANSMISSION FOR
AUTOMOTIVE VEHICLES

Attorney Docket No.: FMC1624PUS/202-1442

RESPONSE TO RESTRICTION REQUIREMENT

Mail Stop Amendment
Commissioner for Patents
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is a response to the Restriction Requirement of March 17, 2005.

Applicants elect provisionally the claims of Group I as required by the Examiner. Group I contains claims 1, 5 and 9. Claim 1 recites a controller for detecting pressure errors during a current shift. Those errors are converted into pressure adjustments during a subsequent shift. Claim 5 recites further limitations dealing with the pressure controller; i.e., a power input shaft speed sensor, second gearset power input element speed sensor and a transmission power output element speed sensor so that shift synchronization requirements can be met.

Although Applicants have elected for further prosecution in this application claims 1, 5 and 9 of Group I to meet the Examiner's restriction requirement, Applicants traverse the restriction requirement. In Applicants' view, the procedure set forth in §806.05(d) of the Manual of Patent Examining Procedure should not require a grouping of Applicants'

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April 13, 2005
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Donald J. Harrington
Name of Person Signing

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claims into 15 separate groups. In Applicants' view, claims 20-30, which are method claims, recite method steps set forth in the sub-combination method claims 8-19. The related structural features of system claims 1-8 also have a counterpart in claims 20-30.

Claims 1, 5 and 9 refer to adaptation for boost pressure time for the second friction clutch. This is indicated by the symbol "A" in Figure 4a. The boost pressure for the second clutch is adjusted in accordance with the boost pressure time error.

Claims 2-4 and 6-8 also are related, one to the other. Claim 2 refers to adaptation for on-coming pressure for the second clutch. This is indicated at "B" in Figure 4a. Slip pressure for the first clutch also is controlled. This is indicated by the symbol "C" in Figure 4d.

Claims 5-8 are dependent claims that depend, respectively, on claims 1-4 so these dependent claims can be grouped with their respective base claims.

Claims 10-13, in Applicants' view, also should be grouped together. Claim 10 refers to conversion of ramping time to pressure adjustment of the second clutch. Claim 11 refers to a method step of converting an error in torque transfer time and adjusting pressure on the second clutch accordingly. Claim 12 refers to the step of detecting overall slip time error for the second clutch and adjusting starting pressure for the second clutch accordingly. Claim 13 refers to conversion of an error in the initial slip time to a starting pressure adjustment for the second clutch.

Claims 14, 18 and 19 also can be grouped together. Claim 14 refers to measurement of a trigger value for the shift progression of each clutch, detection of error in start synchronization and adjustment of pressure for the first clutch as determined by the error. Claim 18 refers to detection of synchronization error at the end of the shift and adjusting the first clutch pressure in accordance with the error. Claim 19 refers to detection of over-shoot error at the end of the shift, and thus is related to the synchronization feature of claims 14 and 18. An adjustment of the first clutch pressure is made in accordance with the detected error.

Claims 15 and 16 also can be grouped together. Claim 15 deals with an adjustment of starting pressure for the first clutch as the friction element for the first gearset begins to slip. Claim 16 refers to closed loop control of pressure of the friction element of the first gearset.

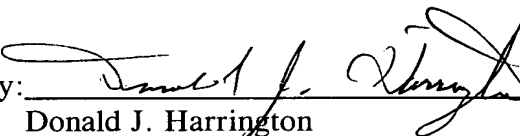
In Applicants' view, it is appropriate to combine the claims in the groupings identified above so that there will be five groupings in addition to the grouping of claims 20-30. In these circumstances, the procedure set forth in §805.05(d), in Applicants' view, is not appropriate.

Favorable consideration of this application with claims 1-30 is requested.

It is noted that the Office Action Summary mailed March 17, 2005, indicated that the application has 29 pending claims, whereas page 3 of the Office Action correctly refers to claim 30. Applicants will assume that the Office Action Summary is in error in this respect.

Respectfully submitted,

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